

## **REMARKS**

Reconsideration is respectfully requested.

### **Claim Objections**

Claim 10 has been amended to recite dependency from claim 6 instead of claim 10, as suggested in the Office Action.

### **Claim Rejections – 35 U.S.C. § 112**

Claims 4, 8, 9 and 10 have been amended in the manner suggested in the Office Action.

### **Claim Rejections – 35 U.S.C. § 101**

Claims 1 and 6 have been amended to recite hardware.

### **Claim Rejections – 35 U.S.C. § 102**

#### **Rejection of Claims 1-4, 6-10 and 12-15 Based on Pinard et al. (5638494)**

Applicants respectfully traverse. Pinard is directed to an adaptive communication system wherein device resources are controlled by programmable agents to perform tasks and accomplish goals. This is not a network management system or method for discovering information about a network. Pinard makes no reference to intelligent network discovery and is non-analogous art. Nor are any of the elements of the rejected claims found in Pinard, as discussed below. Rather, the rejection appears to be based on a picking and choosing of disparate passages in Pinard that do not relate to one another and thus do not describe a cohesive system or method that operates according to the limitations of the rejected claims. It further appears that the terms “discover” and “discovery” in the rejected claims are being ignored or are given no patentable weight. If the Office contends that Pinard does disclose network discovery, discovery agents, and the like, it should clearly and explicitly point out why this is the case, for as previously stated, Applicants can find no mention of intelligent network discovery in Pinard.

### Claim 1

Pinard column 1, lines 47-64 is said to disclose plural discovery agents adapted to discover information concerning said network. The cited passage discusses exemplary goals of a human based organization's work processes and goals and how process agents and device agents may be used to accomplish the goals. There is no mention of the concept of network discovery or of discovery agents adapted to discover information about a network.

Pinard column 3, lines 8-11 is said to disclose discovery agents having an associated discovery capability. The cited passage discusses how goals are input to agents to specify a task that the agent is to perform (i.e., programming an agent). No discovery task is mentioned and there is no mention of discovery agents or discovery capabilities.

Pinard column 3, lines 12-13 is said to disclose discovery agents having an associated discovery assignment. The cited passage discusses the ability of a higher level agent to program lower level agents in order to assist in accomplishing some goal (i.e., programming a sub-agent). There is no mention of the concept of network discovery or discovery agents having an associated discovery assignment.

Pinard column 2, lines 61-64 is said to disclose said agent discovery assignments being a subset of said agent discovery capabilities. The cited passage discusses how agents can be programmed only with goals that are within its knowledge. There is no mention of the concept of network discovery or plural discovery agents collectively having associated discovery assignments that are a subset of their discovery capabilities. There is no mention of collective agent capabilities or assignments, or of sets or subsets.

### Claim 2

Pinard column 5, lines 53-54 is said to disclose overlapping discovery capabilities and non-overlapping discovery capabilities. The cited passage discusses a set area of an agent, which represents the ability of an agent to accept setup goals, which are requests to setup resources for later use by acting goals (i.e., requests for particular services that use resources immediately). There is no mention of the concept of network discovery or of overlapping discovery capabilities and non-overlapping discovery capabilities.

### Claim 3

Pinard column 5, lines 24-27 is said to disclose agent discovery assignments based on discovery capabilities. The cited passage is a listing of different agent types. There is no mention of the concept of network discovery or of agent discovery assignments based on discovery capabilities.

### Claim 4

Pinard column 9, lines 20-25 is said to disclose agent discovery assignments that reflect one or more of data collection service registrations with said agents, agent cost to obtain network information, load balancing among said agents, and assignment churn. The cited passage discusses an information area of an agent that is used by the agent to share information with other agents. There is no mention of the concept of network discovery, or how agent discovery assignments are made, or agent discovery assignments that reflect one or more of data collection service registrations with said agents, agent cost to obtain network information, load balancing among said agents, and assignment churn.

### Claim 6

Pinard column 4, lines 2-6 and Fig. 5 are said to disclose a network manager. The cited passage discusses generic processes, physical processes, generic agents and physical agents. Fig. 5 shows a blackboard (shared memory) where posting agents in need of services post requests and event handling agents register to receive event notifications so that they can perform the needed services. There is no mention of a network manager.

Pinard Fig. 5 is said to disclose plural discovery agents connected to said network manager. The blackboard is not a network manager and there is no reference to discovery agents or to the concept of network discovery.

Pinard column 1, lines 47-64 is said to disclose each of said discovery agents having an associated discovery capability to obtain information concerning said network. The cited passage discusses exemplary goals of a human based organization's work processes and goals and how process agents and device agents may be used to accomplish the goals. There is no mention of the concept of network discovery or of discovery agents having an associated discovery capability to discover information about a network.

Pinard column 5, lines 7-29 is said to disclose capability determining means for determining said agent discovery capabilities. This passage discusses different types of agents. There is no mention of the concept of network discovery or of capability determining means for determining discovery agent capabilities.

Pinard column 5, lines 53-60 is said to disclose assignment computation means for computing agent discovery assignments for one or more of said discovery agents based on said agent discovery capabilities. The cited passage discusses a set area of an agent, which represents the ability of an agent to accept setup goals, which are requests to setup resources for later use by

acting goals (i.e., requests for particular services that use resources immediately). There is no mention of the concept of network discovery or of assignment computation means for computing agent discovery assignments for one or more discovery agents based on agent discovery capabilities.

Pinard column 6, lines 6-11 is said to disclose assignment implementing means for implementing said agent discovery assignments at one or more of said discovery agents. The cited passage discusses a resource area of an agent, which contains data and knowledge required for goal decomposition (i.e., decomposing goals into sub-goals that are passed on to other agents). There is no mention of the concept of network discovery or of assignment implementing means for implementing agent discovery assignments at one or more discovery agents.

#### Claim 7

Pinard column 10, lines 20-26 is said to disclose wherein said network manager is not part of said network. The cited passage discusses the posting of events by agents to a blackboard (shared memory) so that interested event handlers can handle the events. There is no mention of a network manager or a network manager not being part of a network being discovered. There is no mention of the concept of network discovery.

#### Claim 8

Pinard column 11, lines 37-40 is said to disclose wherein one or more of said agents are associated with nodes in said network. The cited passage discusses LAN printers in communication with printer agents. There is no mention of the concept of network discovery, or of discovery agents, or of one or more of said agents being associated with nodes in the network being discovered.

### Claim 9

Pinard column 10, lines 20-26 is said to disclose wherein said capability determining means comprises first means in said network manager for requesting a capability poll, second means in said agents for performing a capability query, and third means in said agents for providing a capability poll response to said network manager. The cited passage discusses the posting of events by agents to a blackboard (shared memory) so that interested event handlers can handle the events. There is no mention of capability determining means that comprises first means in said network manager for requesting a capability poll, second means in said agents for performing a capability query, and third means in said agents for providing a capability poll response to said network manager.

### Claim 10

Pinard column 7, lines 44-46 and column 9, lines 20-22 is said to disclose wherein said assignment computation means is adapted to generate said agent assignments based on one or more of data collection service registrations between said network manager and said agents, agent cost to obtain network information, load balancing among said agents, and assignment churn. The first cited passage discusses a low level agent receiving goals, tasks, policies and usage rights from a high level agent. The second cited passage discusses an information area of an agent that is used by the agent to share information with other agents. There is no mention of the concept of network discovery, or how agent discovery assignments are made, or assignment computation means that generate assignments base on one or more of data collection service registrations with said agents, agent cost to obtain network information, load balancing among said agents, and assignment churn.

### Claim 12

Pinard column 1, lines 55-64 is said to disclose a method for obtaining intelligent discovery of network information in a network using a plurality of network discovery agents having mutually nonexclusive discovery capabilities. This passage states that the Pinard invention is a communication system having a plurality of process agents and device agents each in communication with its own device. The agents in the Pinard system thus appear to have mutually exclusive device capabilities. Moreover, there is no disclosure of the concept of network discovery.

Pinard column 5, lines 28-29 is said to disclose determining agent discovery capabilities. The cited passage discusses different types of agents. There is no mention of the concept of network discovery or of determining agent discovery capabilities.

Pinard column 5, lines 53-60 and column 3, lines 45-49 are said to disclose computing discovery agent assignments based on said agent discovery capabilities. The first cited passage discusses a set area of an agent, which represents the ability of an agent to accept setup goals, which are requests to setup resources for later use by acting goals (i.e., requests for particular services that use resources immediately). The second cited passage discusses a resource broker allocation mechanism whereby a resource that consists of several devices selects a device that can be used to accomplish a goal. There is no mention of the concept of network discovery or of computing discovery agent assignments based on agent discovery capabilities.

Pinard column 6, lines 6-11 is said to disclose implementing discovery agent assignments. The cited passage discusses a resource area of an agent, which contains data and knowledge required for goal decomposition (i.e., decomposing goals into sub-goals that are

passed on to other agents). There is no mention of the concept of network discovery or of implementing discovery agent assignments.

Claim 13

Pinard column 6, lines 45-56 is said to disclose wherein said agent discovery capabilities are determined by performing capability polls. The cited passage discusses how a blackboard (shared memory) and a database can be used to select agents for performing certain services. There is no mention of the concept of network discovery or of determining discovery agent capabilities by performing capability polls.

Claim 14

Pinard column 9, lines 20-25 is said to disclose wherein said agent assignments are computed based on consideration of one or more of data collection service registrations between said network manager and said agents, agent cost to obtain network information, load balancing among said agents, and assignment churn. The cited passage discusses an information area of an agent that is used by the agent to share information with other agents. There is no mention of the concept of network discovery, or how agent discovery assignments are made, or agent discovery assignments that reflect one or more of data collection service registrations with said agents, agent cost to obtain network information, load balancing among said agents, and assignment churn.

Claim 15

Pinard column 5, lines 54-56 is cited as disclosing wherein said agent assignments are implemented by limiting the scope of agent discovery to a subset of said discovery capabilities. The cited passage discusses a set area of an agent, which represents the ability of an agent to accept setup goals, which are requests to setup resources for later use by acting goals (i.e.,

requests for particular services that use resources immediately. There is no mention of the concept of network discovery or of implementing discovery agent assignments by limiting the scope of agent discovery to a subset of agent discovery capabilities.

Rejection of Claim 11 Based on Heitman et al. (2003/0177168)

Applicants respectfully traverse. Heitman (commonly assigned with the present application to International Business Machines Corporation) was cited under 35 U.S.C. § 102(b). However, the Heitman publication date is 9/18/2003, only two days before Applicants' filing date of 9/20/2003. Thus, the § 102(b) rejection is inappropriate and should be withdrawn. Heitman discloses the type of network discovery system referenced in the Background section of the subject application. There is no agent capability determining logic, assignment computation logic or assignment implementing logic. Heitman paragraphs 210-221 discuss services that each discovery agent may provide. This is not agent capability determining logic as recited in claim 11. Heitman paragraph 730 discusses an agent registry. This is not assignment computation logic as recited in claim 11. Heitman paragraph 731 discusses agents residing on hosts and comprising a framework and subagents providing services and functions. This is not assignment implementing logic as recited in claim 11.

Claim Rejections – 35 U.S.C. § 103

Rejection of Claims 5 and 16-20 Based on Pinard in view of Heitman

Applicants respectfully traverse. Pinard is directed to an adaptive communication system wherein device resources are controlled by programmable agents to perform tasks and accomplish goals. This is not a network management system or method for discovering information about a network. Pinard has nothing to do with intelligent network discovery and is non-analogous art. Heitman is directed to intelligent network discovery, but is not combinable

with Pinard because of Pinard's status as non-analogous art. Heitman, moreover is commonly assigned with the present application to International Business Machines Corporation. To the extent that Heitman is being relied upon as a reference under 35 U.S.C. §102(e), the obviousness rejection runs afoul of 35 U.S.C. §103(c).

Claim 5

Claim 5 is believed to be allowable based on its dependence from claim 1, discussed above.

Claim 16

Pinard column 5, lines 28-29 is said to disclose agent discovery capability determining logic adapted to determine discovery capabilities of discovery agents in said data storage network. The cited passage discusses different types of agents. There is no mention of agent discovery determining logic. Nor does Heitman supply this missing teaching.

Pinard column 5, lines 53-60 is said to disclose assignment computation logic adapted to compute agent discovery assignments based on said agent discovery capabilities. The cited passage discusses a set area of an agent, which represents the ability of an agent to accept setup goals, which are requests to setup resources for later use by acting goals (i.e., requests for particular services that use resources immediately). There is no mention of assignment computation logic for computing agent discovery assignments for one or more discovery agents based on agent discovery capabilities. Nor does Heitman supply this missing teaching.

Pinard column, 10, lines 22-26 is said to disclose discovery poll request logic adapted to request network discovery from said agents according to said agent discovery assignments. The cited passage discusses the posting of events by agents to a blackboard (shared memory) so that interested event handlers can handle the events. There is no mention of discovery poll request

logic adapted to request network discovery from agents according to agent discovery assignments. Nor does Heitman supply this missing teaching.

Pinard column 10, lines 20-21 is cited as disclosing discovery poll response logic adapted to process network discovery received from said agents in response to said network discovery requests. The cited passage discusses the posting of events by agents to a blackboard (shared memory) so that interested event handlers can handle the events. There is no mention of discovery poll response logic adapted to process network discovery received from agents in response to network discovery requests. Nor does Heitman supply this missing teaching.

#### Claim 17

Pinard column 5, lines 16-29 is said to disclose discovery capability logic adapted to determine and provide agent discovery capability information to a requestor, said agent discovery capability information being a subset of all discovery information obtainable by said agent. The cited passage discusses different types of agents. There is no mention of a discovery agent having discovery capability logic adapted to determine and provide agent discovery capability information to a requestor, the agent discovery capability information being a subset of all discovery information obtainable by the agent. Nor does Heitman supply this missing teaching.

Pinard column 7, lines 30-33 and column 6, lines 17-22 are said to disclose discovery query logic adapted to implement discovery queries based on agent discovery assignment information determined from said capability information. The first cited passage discusses an agent information area for storing routines and data. The second cited passage discusses how processes are decomposed into goals for various agents and the resources needed to accomplish each goal. There is no disclosure of discovery query logic adapted to implement discovery

queries based on agent discovery assignment information determined from the capability information. Nor does Heitman supply this missing teaching.

Claim 18

Pinard column 5, lines 28-29 is said to disclose determining discovery capabilities of said agents. The cited passage discusses different types of agents. There is no mention of determining agent discovery capabilities. Nor does Heitman supply this missing teaching.

Pinard column 5, lines 53-60 is said to disclose computing agent assignments based on said agent discovery capabilities. The cited passage discusses a set area of an agent, which represents the ability of an agent to accept setup goals, which are requests to setup resources for later use by acting goals (i.e., requests for particular services that use resources immediately). There is no mention of computing agent assignments based on agent discovery capabilities. Nor does Heitman supply this missing teaching.

Pinard column 10, lines 22-26 is said to disclose requesting one or more of said agents to perform network discovery according to said agent discovery assignments. The cited passage discusses the posting of events by agents to a blackboard (shared memory) so that interested event handlers can handle the events. There is no mention of requesting one or more agents to perform network discovery according to agent discovery assignments. Nor does Heitman supply this missing teaching.

Pinard column 11, lines 59-60 is cited as disclosing processing discovery information returned by one or more agents. The cited passage discusses a processor system storing processes that handle group agents and user agents. There is no mention of disclosing processing discovery information returned by one or more agents.

### Claim 19

Pinard column 9, lines 20-25 is cited as disclosing wherein said agent discovery assignments are based on one or more of data collection service registrations between said network manager and said agents, agent cost to obtain network information, load balancing among said agents, and assignment churn. The cited passage discusses an information area of an agent that is used by the agent to share information with other agents. There is no mention of the how agent discovery assignments are made, or agent discovery assignments that reflect one or more of data collection service registrations with said agents, agent cost to obtain network information, load balancing among said agents, and assignment churn. Nor does Heitman supply this missing teaching.

### Claim 20

Pinard column 5, lines 28-35 is said to providing agent discovery capability information to a requestor. The cited passage discusses different types of agents and different means of allocating resources and decomposing goals. There is no mention of a providing agent discovery capability information to a requestor. Nor does Heitman supply this missing teaching.

Pinard column 5, lines 16-60 is said to disclose receiving agent discovery assignments from said requester that are based on said discovery capability information. The cited passage discusses different types of agents and a set area of an agent, which represents the ability of an agent to accept setup goals, which are requests to setup resources for later use by acting goals (i.e., requests for particular services that use resources immediately). There is no disclosure of receiving agent discovery assignments from a requester that are based on discovery capability information. Nor does Heitman supply this missing teaching.

Pinard column 6, lines 17-22 is cited as disclosing performing intelligent discovery according to said agent discovery assignments. The cited passage discusses how processes are decomposed into goals for various agents and the resources needed to accomplish each goal. There is no disclosure of performing intelligent discovery according to agent discovery assignments. Nor does Heitman supply this missing teaching.

Pinard column 7, lines 30-40 is cited as disclosing providing intelligent discovery information received in response to said intelligent discovery to said requester. The cited passage discusses an agent information area for storing routines and data, and links between agents. There is no disclosure of providing intelligent discovery information received in response to intelligent discovery to a requester.

Applicants have amended the specification to correct grammatical errors therein.

In view of the foregoing, Applicants respectfully request that all rejections be withdrawn and that Notices of Allowability and Allowance be issued.

Respectfully submitted,

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